

Briefing Statement

Bureau: National Park Service
Issue: Population Size of Yellowstone Bison
Park Site: Yellowstone National Park
Date: July 20, 2020

Key Points:

- Since 2001, managers have successfully achieved the goals and associated objectives of the Interagency Bison Management Plan (IBMP; see *Background*) with a population of 2,900-5,500 bison.
- Larger numbers of bison (4,500-5,500) since 2014 resulted in sustained annual migrations which enable more consistent population regulation using harvests and roundups for quarantine and slaughter (see attached figure).
- Conflicts between bison, cattle, and people (property, safety) decreased since 2015 due to increased tolerance in Montana, treaty harvests, and management experience (e.g., less unnecessary hazing; see table).
- Yellowstone bison are the largest wild, wide-ranging population in North America and the only wild population with an effective size high enough to avoid inbreeding depression and maintain genetic variation. Genetic diversity and population viability is predicted to decrease with fewer than 3,500 bison.
- The Department of the Interior is better fulfilling its trust responsibilities to American Indian tribes with a larger population of bison that supports larger treaty harvests and rehoming more brucellosis-free bison to tribal lands.
- Repeated grazing by large groups of migratory bison generally has positive effects on grass growth by increasing available nutrients, improving soil water-holding potential, and supporting growth through summer.

Background:

- The goal of the IBMP is to maintain a wild population of Yellowstone bison and address the risk of brucellosis transmission from bison to protect the economic interest and viability of Montana's livestock industry.
- The objectives of the IBMP are to:
 - Address bison population size and distribution with specific commitments relating to the size of bison herd;
 - Clearly define a boundary line beyond which bison will not be tolerated;
 - Address the risk to public safety and private property damage by bison;
 - Commit to the eventual elimination of brucellosis in bison and other wildlife;
 - Protect livestock from the risk of brucellosis transmission from bison;
 - Protect the state of Montana from risk of reduction in its brucellosis status;
 - Maintain a viable population of wild bison in Yellowstone National Park (biology, genetics, and ecology);
 - Base decisions on reliable information, with the recognition that scientific understanding is, or can, evolve;
 - Recognize the need for coordination in the management of natural and cultural resource values that are the responsibility of the signatory agencies.
- When the IBMP was negotiated in the late 1990s, there was pressure to prevent cattle from being infected with brucellosis to maintain interstate movements and trade agreements without additional testing. A population target of 3,000 bison was chosen to reduce migrations outside the park to prevent brucellosis transmission.
- Managing for 3,000 bison during 2000-2008 increased disagreement over repeatedly having more than 3,000 animals and having to remove too many bison at once (30-40% of the population) to reach 3,000 animals, which culminated in a U.S. Government Accountability Office review and critique of bison management.
- A 2006 adjustment to the IBMP clarified "a population of 3,000 bison is defined as a population indicator to guide implementation of risk management activities and is not a target for deliberate population adjustment."
- An adaptive management plan was developed in 2009 to reduce bison shipments to slaughter and bison numbers averaged 4,584 (range ~3,300 to 5,500) during 2010-2019.

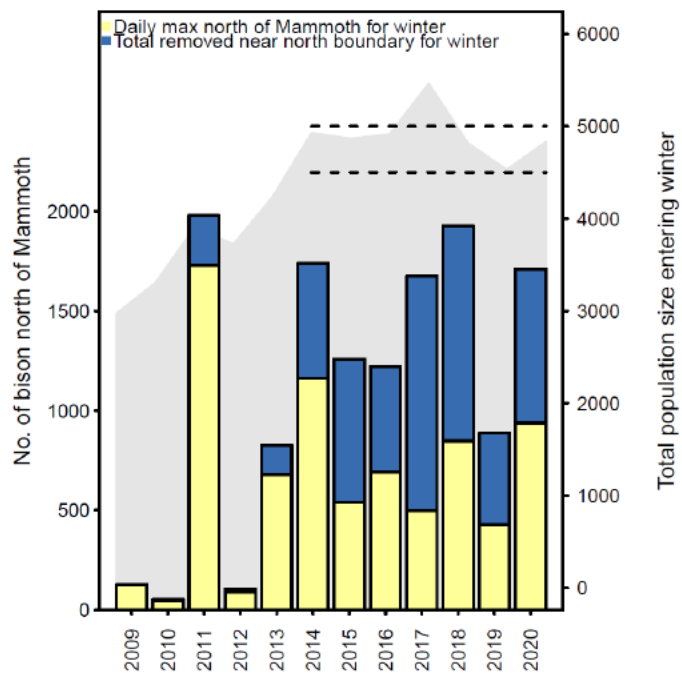
Current Status:

- Maintaining 4,000 to 6,000 bison after calving would sustain a viable population with high genetic diversity, migration outside the park to support conservation and hunting, and the rehoming of plains bison elsewhere.
- Within this population range, managers have successfully implemented measures to avoid brucellosis transmission from bison to cattle and lessen property damage and safety issues with people.
- About 300 to 1,200 bison would be removed each year via harvests and captures for quarantine or slaughter. Federal and state managers agreed to increase quarantine to restore more brucellosis-free bison to tribal lands rather than shipping them to slaughter and maintain a low risk of brucellosis spreading from bison to cattle.

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Winter	Total No. Bison	North Herd	Bison in Gardiner Basin	No. of Bison North of Yankee Jim	Hazing Events	Bison Mix with Cattle (Events)	Brucellosis Transmission to Cattle from Bison	Harvests North of Park	Bison to Fort Peck
2001	2,708	590	NA	NA	3	NA	0	0	0
2002	3,283	719	NA	NA	7	NA	0	0	0
2003	4,045	805	NA	NA	15	NA	0	0	0
2004	3,811	888	NA	NA	36	NA	0	0	0
2005	4,215	876	NA	NA	39	NA	0	0	0
2006	5,015	1,484	NA	NA	NA	NA	0	32	0
2007	3,889	1,377	NA	NA	NA	NA	0	47	0
2008	4,694	2,070	NA	NA	NA	NA	0	59	0
2009	2969	1500	126	0	13	0	0	1	0
2010	3301	1839	46	0	7	0	0	4	0
2011	3898	2245	1729	65	174	9	0	NA	0
2012	3720	2314	90	0	1	2	0	15	61
2013	4230	2669	679	1	81	6	0	148	0
2014	4924	3420	1164	569	42	0	0	258	139
2015	4865	3421	540	0	5	0	0	201	0
2016	4910	3600	693	0	11	0	0	378	0
2017	5459	4008	498	50	3	0	0	389	0
2018	4816	3969	847	0	0	0	0	285	0
2019	4527	3337	430	0	0	0	0	109	93
2020	4829	3667	939	2	?	0	0	223	11

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